

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1 – 62. (canceled)

63. (original) A method of forming a catheter for nebulizing a liquid with a gas, the catheter having closely spaced distal orifices sized and spaced apart with low tolerances, comprising the steps of:

providing a relatively large size multilumen extruded polymer tubing;
heating a portion of the tubing to a transition temperature of said tubing;
drawing down said portion of tubing to form a tapered section with a draw down ratio in the range between 2 to 1 and 20 to 1 such that the lumens are increasingly closely spaced in said tapered region; and

forming a plurality of orifices at a distal end of said tapered section, said plurality of orifices being sized to nebulize a liquid delivered through one of said lumens to form an aerosol with a gas delivered through another of said lumens.

64. (currently amended) The method of claim 77 [[63]] wherein the step of forming a plurality of orifices further comprises:

cutting a distal end of the distal tapered section.

65. (currently amended) The method of Claim 77 [[63]] further comprising:
cutting the tubing to size to form a shaft portion of the nebulization catheter.

66. (currently amended) The method of Claim 77 [[63]] further comprising:
exposing a portion of said tubing to high energy radiation.

67. (currently amended) The method of Claim 77 [[63]] in which said catheter is for use in the respiratory system.

68. (currently amended) The method of Claim 77 [[63]] in which the step of heating further comprises:

heating the tubing to a temperature between a melt state and a glass state of said tubing.

69. (currently amended) The method of claim 77 [[63]] further comprising providing radiopaque markings along at least a portion of the catheter.

70. (previously presented) The method of claim 69 wherein said radiopaque markings comprise graduated markings along the catheter.

71. (previously presented) The method of claim 69, wherein the step of providing radiopaque markings comprises attaching at least one of radiopaque bands of metal and radiopaque heat shrunk bands of doped radiopaque plastic to the catheter.

72. (currently amended) The method of claim 77 [[63]] further comprising providing ultrasonically reflecting markings along the catheter.

73. (currently amended) The method of claim 77 [[63]] further comprising fabricating a stripe along a side of the catheter, wherein said strip comprises one of a radiopaque material or [[and]] an ultrasonically reflective material, whereby the stripe is useful for determining a rotational orientation of the catheter.

74. (previously presented) The method of claim 73 wherein fabricating a stripe comprises forming the stripe with a coextrusion process.

75. (previously presented) The method of claim 73 wherein fabricating a stripe comprises embedding a wire in a wall of the nebulization catheter.

76. (previously presented) The method of claim 63, wherein at least a portion of the catheter is constructed of a compliant material.

77. (previously presented) A method of forming a catheter for nebulizing a liquid with a gas, the catheter having closely spaced distal orifices comprising:

providing a multilumen extruded polymer tubing;

heating a portion of the tubing to a transition temperature of said tubing;
forming a j-shaped distal section in the multilumen extruded polymer tubing, wherein the multilumen extruded polymer tubing curves away from a longitudinal axis of the catheter at a distal end of the catheter; and

forming a plurality of orifices at the distal section, said plurality of orifices being sized to nebulize a liquid delivered through one of said lumens to form an aerosol with a gas delivered through another of said lumens.

78. (previously presented) The method of claim 77, wherein the j-shaped distal section is maintained in an orientation having the plurality of orifices pointing substantially towards a proximal end of the catheter.

79. (previously presented) The method of claim 78 wherein the j-shaped distal section is maintained in the orientation by attaching a first end of a tether to an end of the j-shaped distal section and a second end of a tether to a portion of a shaft of the catheter.

80. (previously presented) The method of claim 79, wherein the tether comprises a wire.

81. (previously presented) The method of claim 77, wherein at least a portion of the catheter is constructed of a compliant material.